



April 1, 2013

Republic Services, Inc
Zion Landfill
Jim Hitzeroth
701 Green Bay Road
Zion, IL 60099

RE: Republic Zion Landfill 1st Quarter 2013 NSPS Surface Scan

Dear Mr. Hitzeroth,

American Environmental Group, Ltd. (AEG) prepared the enclosed report documenting the results of the 1st Quarter 2013 NSPS surface scan at Republic Zion Landfill. The initial monitoring event was performed on March 25, 2013. We noted no (0) exceedances of the 500 parts per million methane by volume (ppm) standard at the facility during the initial scan event.

In summary, the site met the NSPS standards for surface emissions for the 1st Quarter 2013 Surface Scan event, and no further action is required. Field monitoring forms are attached for your files.

Weather Conditions

Weather conditions recorded during the monitoring events were as follows:

March 25, 2013:

- Temperature approximately 34° Fahrenheit
- Relative humidity of 75 percent
- Barometric pressure of 29.84"Hg
- Wind North at about 13 mph
- Overcast skies

In accordance with NSPS regulations, these monitoring events were performed during typical meteorological conditions.

The survey was conducted in accordance with the regulations set forth in the New Source Performance Standard (NSPS), 40 CFR 60.755 (c) and (d); (2) 40 CFR 60, 40 CFR 60.753(d) - Surface Scan Requirements, Appendix A – Method 21. A Photovac (MicroFID) flame ionization detector (FID) was used to perform the emissions monitoring. During the event, attention was given to monitoring unusual cover conditions (stressed vegetation, cracks, seeps, etc.) and areas with unusual odors. The FID was calibrated at the beginning of each day, prior to performing the monitoring, in accordance with Method 21 compliance requirements. Calibration logs were completed by the field technician performing the work, and are included in Attachment A. During the monitoring event, AEG observed that the ground surface appeared to be in good

condition overall, and there were no unusual odors noted. Results are presented in the attached forms.

Please call Dave Ovanek at (815) 671-0203 if you have any questions.

Sincerely,



Margaret Fisher
Data Department Manager
American Environmental Group, Ltd.

On Behalf of
Dave Ovanek
Project Manager
American Environmental Group, Ltd.

Attachments: Attachment A: Daily Calibration Logs
Attachment B: Daily Surface Monitoring Log
Attachment C: Site Drawing

Cc: Jim Lewis, Advanced Disposal – Electronic



**DAILY CALIBRATION LOGS
ATTACHMENT A**



American
Environmental
Group Ltd.

CALIBRATION PRECISION TEST RECORD

Initial Event: March 25, 2013

LANDFILL NAME: Zion - Republic

MONITORING DATE: March 25, 2013 PERFORMED BY: Jamie Moreno

EVENT: SEM 1st Quarter 2013 TIME: 10:20 AM

INSTRUMENT MAKE: Photovac MODEL: Mico FID S/N: CZMF326

Calibration Gas Standard 500ppm CH₄ (STD)

MEASUREMENT # 1:

Meter Reading for Zero Air: 0.0 ppm (1)

Meter Reading for Calibration Gas: 511.0 ppm (2)

MEASUREMENT # 2:

Meter Reading for Zero Air: 0.0 ppm (3)

Meter Reading for Calibration Gas: 508.0 ppm (4)

MEASUREMENT # 3:

Meter Reading for Zero Air: 0.0 ppm (5)

Meter Reading for Calibration Gas: 505.0 ppm (6)

CALCULATE PRECISION:

$$\frac{|500 - (2)| + |500 - (4)| + |500 - (6)|}{3} \times \frac{1}{500} \times \frac{100}{1}$$

$$= \underline{1.600\%} \quad \% \text{ (must be less than 10\%)}$$



INSTRUMENT RESPONSE TIME TEST RECORD

Initial Event: March 25, 2013

LANDFILL NAME: Zion - Republic

MONITORING DATE: March 25, 2013 Time: 10:25 AM

INSTRUMENT MAKE: Photovac MODEL: MicroFID S/N: CZMF326

MEASUREMENT # 1:

Stabilized Reading Using Calibration Gas:	<u>505.0</u>	ppm
90% of the Stabilized Reading:	<u>454.5</u>	ppm
Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas	<u>7.0</u>	seconds (1)

MEASUREMENT # 1:

Stabilized Reading Using Calibration Gas:	<u>503.0</u>	ppm
90% of the Stabilized Reading:	<u>452.7</u>	ppm
Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas	<u>7.0</u>	seconds (2)

MEASUREMENT # 1:

Stabilized Reading Using Calibration Gas:	<u>502.0</u>	ppm
90% of the Stabilized Reading:	<u>451.8</u>	ppm
Time to Reach 90% of Stabilized reading after switching from Zero Air to Calibration Gas	<u>6.0</u>	seconds (3)

CALCULATE RESPONSE TIME:

$$\frac{(1) + (2) + (3)}{3}$$

= 6.667 SECONDS (MUST BE LESS THAN 30 SECONDS)

PERFORMED BY: Jamie Moreno



American
Environmental
Group Ltd.

CALIBRATION PROCEDURE AND BACKGROUND DETERMINATION REPORT

Initial Event: March 25, 2013

LANDFILL NAME: Zion - Republic

INSTRUMENT MAKE: Photovac MODEL: Mico FID S/N: CZMF326

Calibration Procedure

1. Allow instrument to internally zero itself while introducing zero air.

2. Introduce the calibration gas into the probe.

Stable Reading= 502.0 ppm

3. Adjust meter to read 500 ppm.

BACKGROUND DETERMINATION PROCEDURE

1. Upwind Reading (highest in 30 seconds): 0.0 ppm (1)

Location: Next to GMP-4

2. Downwind Reading (highest in 30 seconds): 0.0 ppm (2)

Location: 15' south of GMP-9

Calculate Background Value: $\frac{(1) + (2)}{2}$

Background = 0.00 ppm

PERFORMED BY: Jamie Moreno

TIME: 10:30 AM

DATE: March 25, 2013



**DAILY SURFACE MONITORING LOGS
ATTACHMENT B**

Individual Monitoring Exceedance
Surface Monitoring Design Plan

Use this form to record an individual monitoring exceedance and follow-up monitoring activities.

This form is only used when a reading of 500 ppm above background is encountered during the surface monitoring.

Use a separate form for each initial exceedance.

<u>Initial Monitoring Exceedance:</u>		No Exceedances	
Date: _____	Time: _____ am/pm	Monitoring Technician Initials: _____	
Instrument reading - Background reading: _____ ppm - _____ ppm		=	_____ ppm
Location of monitored exceedance (include description of field marker used): _____			
Describe cover maintenance or adjustments to the vacuum of adjacent wells to increase gas collection in vicinity of measured exceedance before remonitoring in 10 days: _____			

<u>Remonitor location within 10 calendar days of initial exceedance:</u>			
Date: _____	Time: _____ am/pm	Monitoring Technician Initials: _____	
Instrument reading - Background reading: _____ ppm - _____ ppm		=	_____ ppm
If 10 day remonitoring shows an exceedance, describe additional corrective action taken before remonitoring again within 10 days: _____			
If the 10 day remonitoring is <500 ppm, remonitor 1 month from initial exceedance:			
Date: _____	Time: _____ am/pm	Monitoring Technician Initials: _____	
Instrument reading - Background reading: _____ ppm - _____ ppm		=	_____ ppm
If the 1 month remonitoring is <500 ppm, resume normal quarterly monitoring.			
If the 1 month remonitoring shows an exceedance, describe additional corrective action taken before remonitoring again within 10 days: _____			

<u>Remonitor location within 10 calendar days of 2nd exceedance:</u>			
Date: _____	Time: _____ am/pm	Monitoring Technician Initials: _____	
Instrument reading - Background reading: _____ ppm - _____ ppm		=	_____ ppm
If the 10 day remonitoring is <500 ppm, remonitor 1 month from initial exceedance:			
Date: _____	Time: _____ am/pm	Monitoring Technician Initials: _____	
Instrument reading - Background reading: _____ ppm - _____ ppm		=	_____ ppm

If the 1 month remonitoring is <500 ppm, resume normal quarterly monitoring.

If the 1 month remonitoring shows an exceedance, describe additional corrective action taken before remonitoring again within 10 days: _____

(use additional forms if necessary)*

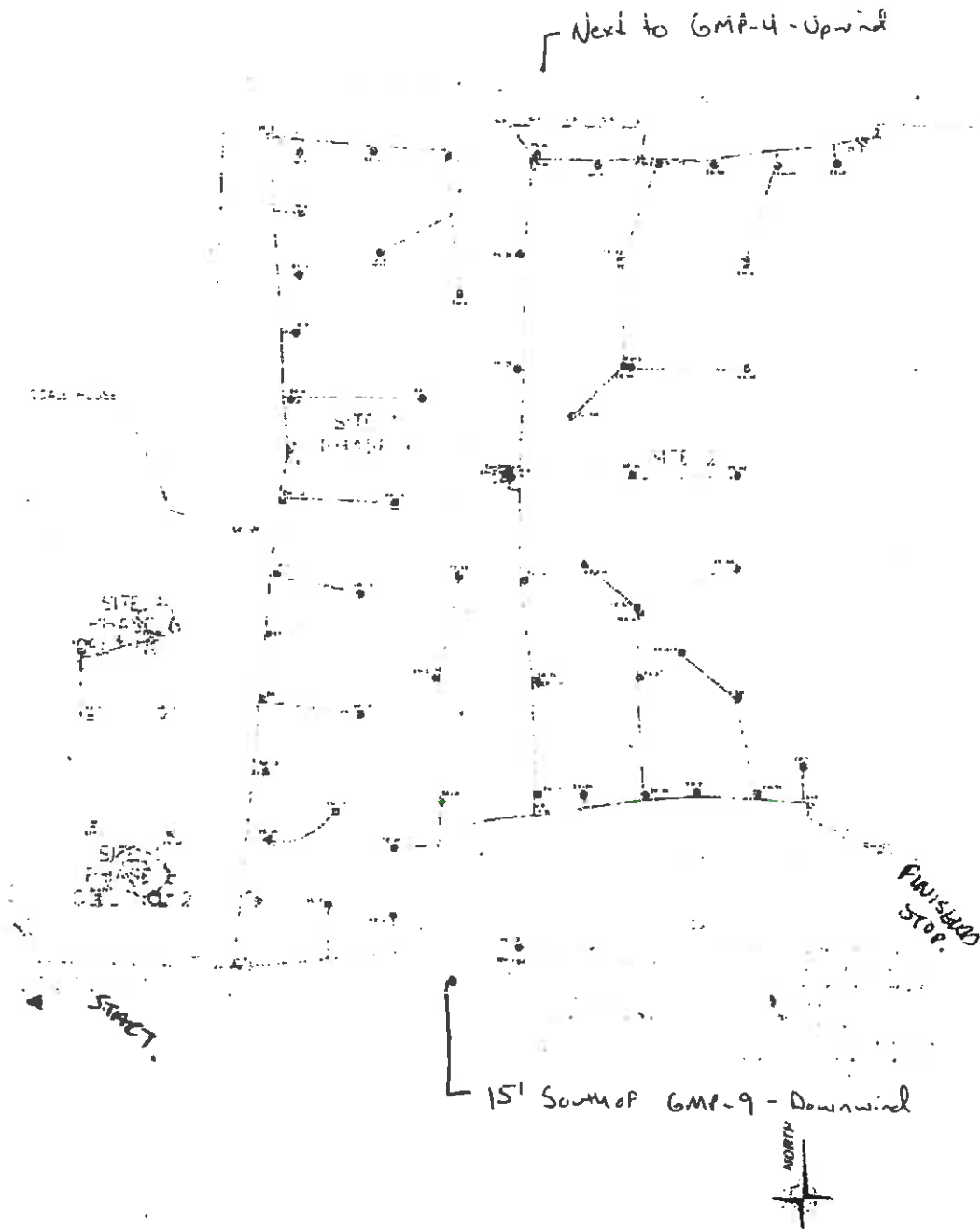
*If monitoring shows 3 exceedances within a quarterly period a new well or other collection device must be installed within 120 days of initial exceedance or alternative remedies/timelines may be submitted to the Administrator for approval. Further monitoring is not necessary until the remedy is completed. The 3 exceedances do **not** have to be consecutive.



SITE DRAWING

ATTACHMENT C

Republic Zion Landfill
SEM 1st Quarter 2013
Jamie Moreno, AEGL
No exceedances



Zion - Republic
Jamie Moreno 5/25/13
0 Exceedances